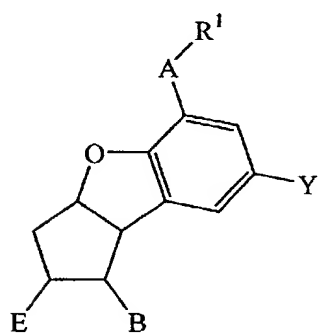


## CLAIMS

1. An agent for modulating growth or generation of hair comprising a prostaglandin EP4 ligand as an active ingredient.
  2. The agent for modulating growth or generation of hair according to claim 1,
- 5 wherein the said prostaglandin EP4 receptor ligand is a 5,6,7-trinor-4,8-inter-m-phenylene PGI<sub>2</sub> derivative of the following Formula (I) or a pharmacologically acceptable salt thereof:

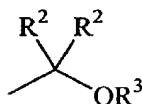


(I)

[wherein

R<sup>1</sup> is

(i)



wherein R<sup>2</sup> is hydrogen, C<sub>1</sub>-C<sub>4</sub> linear alkyl, C<sub>3</sub> or C<sub>4</sub> branched alkyl, trifluoromethyl, -C(=O)-R<sup>4</sup>, or -C(=O)-O-R<sup>4</sup>, wherein R<sup>4</sup> is C<sub>1</sub>-C<sub>12</sub> linear alkyl, C<sub>3</sub>-C<sub>14</sub> branched alkyl, C<sub>3</sub>-C<sub>12</sub> cycloalkyl, C<sub>7</sub>-C<sub>12</sub> aralkyl, phenyl or substituted phenyl (wherein the substituent is at least one fluorine, chlorine, bromine, iodine, trifluoromethyl, C<sub>1</sub>-C<sub>4</sub> alkyl, nitro, cyano, methoxy, phenyl, phenoxy, p-acetamidebenzamide, -CH=N-NH-C(=O)-NH<sub>2</sub>, -NH-C(=O)-Ph, -NH-C(=O)-CH<sub>3</sub> or -NH-C(=O)-NH<sub>2</sub>), and the two R<sup>2</sup>s may be the same or different; R<sup>3</sup> is hydrogen, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>12</sub> acyl, C<sub>7</sub>-C<sub>16</sub> aroyl, C<sub>7</sub>-C<sub>16</sub> aralkyl, tetrahydropyranyl,

tetrahydrofuranyl, 1-ethoxyethyl, allyl, tert-butyl or tert-butyldimethylsilyl,

(ii)  $-\text{COOR}^5$

wherein  $\text{R}^5$  is

(1) hydrogen or pharmacologically acceptable cation,

(2)  $\text{C}_1\text{-C}_{12}$  linear alkyl or  $\text{C}_3\text{-C}_{14}$  branched alkyl,

(3)  $-\text{Z-R}^6$

wherein Z is a valence bond, or linear or branched alkylene represented by the formula  $\text{C}_t\text{H}_{2t}$  wherein t represents an integer of 1 to 6,  $\text{R}^6$  is  $\text{C}_3\text{-C}_{12}$  cycloalkyl, or  $\text{C}_3\text{-C}_{12}$  cycloalkyl substituted with 1 to 4  $\text{R}^7$ 's wherein  $\text{R}^7$  is hydrogen or  $\text{C}_1\text{-C}_5$  alkyl,

(4)  $-(\text{CH}_2\text{CH}_2\text{O})_n\text{CH}_3$

wherein n represents an integer of 1 to 5,

(5)  $-\text{Z-Ar}$

wherein Z is defined as the same as the above, Ar is phenyl,  $\alpha$ -naphthyl,  $\beta$ -naphthyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $\alpha$ -furyl,  $\beta$ -furyl,  $\alpha$ -thienyl,  $\beta$ -thienyl or substituted phenyl (wherein the substituent is the same as the substituent defined for the substituted phenyl mentioned above),

(6)  $-\text{C}_t\text{H}_{2t}\text{COOR}^8$

wherein t is defined as the same as the above,  $\text{R}^8$  is hydrogen or  $\text{C}_1\text{-C}_5$  alkyl,

(7)  $-\text{C}_t\text{H}_{2t}\text{N}(\text{R}^9)_2$

wherein t is defined as the same as above,  $\text{R}^9$  is hydrogen or  $\text{C}_1\text{-C}_5$  alkyl, and the two  $\text{R}^9$ 's may be the same or different,

(8)  $-\text{CH}(\text{R}^{10})-\text{C}(=\text{O})-\text{R}^{11}$

wherein  $\text{R}^{10}$  is hydrogen or benzoyl,  $\text{R}^{11}$  is phenyl, p-bromophenyl, p-chlorophenyl, p-biphenyl, p-nitrophenyl, p-benzamidephenyl or 2-naphthyl,

(9)  $-\text{C}_p\text{H}_{2p}-\text{W-R}^{12}$

wherein p represents an integer of 1 to 5, W is  $-\text{CH}=\text{CH}-$ ,  $-\text{CH}=\text{C}(\text{R}^{13})-$  or

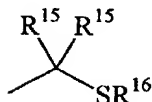
$-\text{C}\equiv\text{C}-$  wherein  $\text{R}^{13}$  is  $\text{C}_1\text{-C}_{30}$  linear alkyl,  $\text{C}_3\text{-C}_{30}$  branched alkyl or  $\text{C}_7\text{-C}_{30}$  aralkyl,

$R^{12}$  is hydrogen,  $C_1$ - $C_{30}$  linear alkyl,  $C_3$ - $C_{30}$  branched alkyl or  $C_7$ - $C_{30}$  aralkyl, or



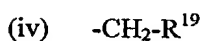
wherein  $R^{14}$  is  $C_1$ - $C_{30}$  alkyl or  $C_1$ - $C_{30}$  acyl, and the two  $R^{14}$ s may be the same or different,

(iii)



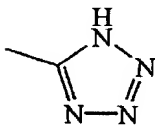
wherein  $R^{15}$  represents is hydrogen,  $C_1$ - $C_4$  linear alkyl,  $C_3$  or  $C_4$  branched alkyl, trifluoromethyl,  $-\text{C}(=\text{O})-\text{R}^{17}$  or  $-\text{C}(=\text{O})-\text{O}-\text{R}^{17}$  wherein  $R^{17}$  is  $C_1$ - $C_{12}$  linear alkyl,  $C_3$ - $C_{14}$  branched alkyl,  $C_3$ - $C_{12}$  cycloalkyl,  $C_7$ - $C_{12}$  aralkyl, phenyl or substituted phenyl (wherein the substituent is the same as the substituent defined for the substituted phenyl mentioned above), and the two  $R^{15}$ s may be the same or different;  $R^{16}$  is hydrogen,  $C_1$ - $C_{12}$  linear alkyl,  $C_3$ - $C_{14}$  branched alkyl, phenyl or substituted phenyl (wherein the substituent is the same as the substituent defined for the substituted phenyl mentioned above), or

$-\text{C}(=\text{O})-\text{R}^{18}$  wherein  $R^{18}$  represents  $C_1$ - $C_{12}$  linear alkyl,  $C_3$ - $C_{14}$  branched alkyl,  $C_3$ - $C_{12}$  cycloalkyl,  $C_7$ - $C_{12}$  aralkyl, phenyl or substituted phenyl (wherein the substituent is the same as the substituent defined for the substituted phenyl mentioned above),

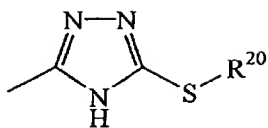


wherein  $R^{19}$  is

(1)

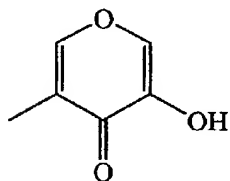


(2)

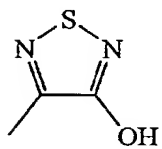


wherein  $R^{20}$  represents hydrogen,  $C_1$ - $C_{12}$  linear alkyl,  $C_3$ - $C_{14}$  branched alkyl, phenyl, substituted phenyl (wherein the substituent is the same as the substituent defined for the substituted phenyl mentioned above), or  $-C(=O)-R^{21}$  wherein  $R^{21}$  is  $C_1$ - $C_{12}$  linear alkyl,  $C_3$ - $C_{14}$  branched alkyl,  $C_3$ - $C_{12}$  cycloalkyl,  $C_7$ - $C_{12}$  aralkyl, phenyl, or substituted phenyl (wherein the substituent is the same as the substituent defined for the substituted phenyl mentioned above),

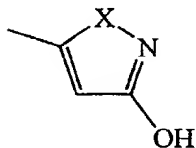
(3)



(4)



(5)



wherein  $X$  represents  $-O-$  or  $-S-$ , or

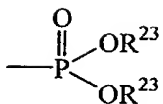
(6) azide,

(v)  $-C(R^{22})_3$ 

wherein  $R^{22}$  represents hydrogen, fluorine, chlorine, bromine, iodine, cyano or  $C_1$ - $C_4$  alkyl, and all of the  $R^{22}$ s may be the same or different,

15

(vi)



wherein  $R^{23}$  represents hydrogen,  $C_1$ - $C_4$  alkyl, phenyl, substituted phenyl (wherein the substituent is the same as the substituent defined for the substituted phenyl mentioned above),  $-\text{CH}_2\text{-OR}^{24}$  (wherein  $R^{24}$  is  $C_1$ - $C_{12}$  linear alkyl,  $C_3$ - $C_{14}$  branched alkyl,  $C_3$ - $C_{12}$  cycloalkyl,  $C_7$ - $C_{12}$  aralkyl, phenyl, or substituted phenyl (wherein the substituent is the same as the substituent defined for the substituted phenyl mentioned above), or pharmacologically acceptable cation, and the two  $R^{23}$ s may be the same or different,

(vii)  $-\text{N}(\text{R}^{25})_2$

wherein  $R^{25}$  is hydrogen,  $C_1$ - $C_{12}$  linear alkyl,  $C_3$ - $C_{14}$  branched alkyl,  $C_3$ - $C_{12}$  cycloalkyl,  $C_4$ - $C_{13}$  cycloalkylalkyl,  $C_7$ - $C_{12}$  aralkyl,  $-\text{C}(=\text{O})\text{-R}^{26}$ ,  $-\text{C}(=\text{O})\text{-O-R}^{26}$ ,  $-\text{SO}_2\text{-R}^{26}$ , phenyl or substituted phenyl (wherein the substituent is the same as the substituent defined for the substituted phenyl mentioned above),  $R^{26}$  is  $C_1$ - $C_{12}$  linear alkyl,  $C_3$ - $C_{14}$  branched alkyl,  $C_3$ - $C_{12}$  cycloalkyl,  $C_7$ - $C_{12}$  aralkyl, phenyl or substituted phenyl (wherein the substituent is the same as the substituent defined for the substituted phenyl mentioned above), the two  $R^{25}$ s may be the same or different (when one of the  $R^{25}$ s is  $-\text{SO}_2\text{-R}^{26}$ , the other  $R^{25}$  is not  $-\text{SO}_2\text{-R}^{26}$ ),

(viii)  $-\text{C}(=\text{O})\text{CH}_2)_k\text{-H}$

wherein  $k$  is an integer of 1 or 2, or

(ix)  $-\text{C}(=\text{O})\text{-N}(\text{R}^{27})_2$

wherein  $R^{27}$  is hydrogen,  $C_1$ - $C_{12}$  alkyl,  $C_3$ - $C_{12}$  cycloalkyl, phenyl, substituted phenyl (wherein the substituent is the same as the substituent defined for the substituted phenyl mentioned above),  $C_4$ - $C_{13}$  cycloalkylalkyl,  $C_7$ - $C_{12}$  aralkyl, cyano or  $-\text{SO}_2\text{-R}^{28}$  wherein  $R^{28}$  is  $C_1$ - $C_{12}$  alkyl,  $C_3$ - $C_{12}$  cycloalkyl, phenyl, substituted phenyl (wherein the substituent is the same as the substituent defined for the substituted phenyl mentioned above),  $C_4$ - $C_{13}$  cycloalkylalkyl, or  $C_7$ - $C_{12}$  aralkyl, and the two  $R^{27}$ s may

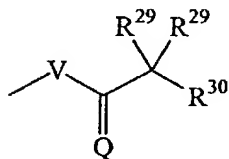
be the same or different (when one of the  $R^{27}$ s is  $-\text{SO}_2\text{-R}^{28}$ , the other  $R^{27}$  is not  $-\text{SO}_2\text{-R}^{28}$ );

Y is hydrogen,  $\text{C}_1\text{-C}_4$  alkyl, fluorine, chlorine, bromine, formyl, methoxy or nitro;

B is

5

(i)



wherein V is

(1)  $-\text{CH}_2\text{CH}_2-$ ,

(2)  $-\text{C}\equiv\text{C}-$ ,

or

10

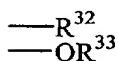
(3)  $-\text{CH}=\text{C}(\text{R}^{31})-$

wherein  $\text{R}^{31}$  is hydrogen,  $\text{C}_1\text{-C}_5$  alkyl, fluorine, chlorine, bromine or iodine,

Q is

(1)  $=\text{O}$

(2)



15

or

(3)



wherein  $\text{R}^{32}$  is hydrogen,  $\text{C}_1\text{-C}_4$  linear alkyl,  $\text{C}_3$  or  $\text{C}_4$  branched alkyl, trifluoromethyl,

$-\text{C}(=\text{O})\text{-R}^{34}$ , or  $-\text{C}(=\text{O})\text{-O-R}^{34}$  wherein  $\text{R}^{34}$  represents  $\text{C}_1\text{-C}_{12}$  linear alkyl,  $\text{C}_3\text{-C}_{14}$

branched alkyl,  $\text{C}_3\text{-C}_{12}$  cycloalkyl,  $\text{C}_7\text{-C}_{12}$  aralkyl, phenyl or substituted phenyl

20

(wherein the substituent is the same as the substituent defined for the substituted

phenyl mentioned above);  $\text{R}^{33}$  is hydrogen,  $\text{C}_1\text{-C}_4$  alkyl,  $\text{C}_1\text{-C}_{12}$  acyl,  $\text{C}_7\text{-C}_{16}$  aroyl,

$\text{C}_7\text{-C}_{16}$  aralkyl, tetrahydropyranyl, tetrahydrofuranyl, 1-ethoxyethyl, allyl, tert-butyl

or tert-butyldimethylsilyl, and the two  $R^{32}$ s may be the same or different;  $R^{29}$  is hydrogen, fluorine, chlorine, bromine, iodine, cyano or  $C_1$ - $C_4$  alkyl, and the two  $R^{29}$ s may be the same or different;

$R^{30}$  is

5 (1)  $-Z-R^{35}$

wherein Z is defined as the same as the above,  $R^{35}$  is  $C_1$ - $C_{12}$  linear alkyl,  $C_3$ - $C_{14}$  branched alkyl,  $C_3$ - $C_{12}$  cycloalkyl,  $C_4$ - $C_{13}$  cycloalkylalkyl,  $C_3$ - $C_{12}$  cycloalkyl substituted with 1 to 4  $R^{36}$ s (wherein  $R^{36}$  is hydrogen or  $C_1$ - $C_5$  alkyl),  $C_4$ - $C_{13}$  cycloalkylalkyl substituted with 1 to 3  $R^{36}$ s (wherein  $R^{36}$  is defined as the same as the above), phenyl, substituted phenyl (wherein the substituent is the same as the substituent defined for the substituted phenyl mentioned above),  $\alpha$ -naphthyl,  $\beta$ -naphthyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $\alpha$ -furyl,  $\beta$ -furyl,  $\alpha$ -thienyl or  $\beta$ -thienyl,

(2)  $-Z-O-R^{35}$

wherein Z and  $R^{35}$  are defined as the same as the above,

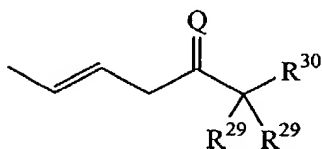
(3)  $-Z-CH=C(R^{35})_2$

wherein Z and  $R^{35}$  are defined as the same as the above, and the two  $R^{35}$ s may be the same or different, or

(4)  $-Z-C\equiv C-R^{35}$

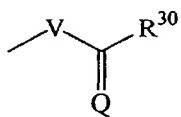
wherein Z and  $R^{35}$  are defined as the same as the above,

20 (ii)



wherein Q,  $R^{29}$  and  $R^{30}$  are defined as the same as the above, and the two  $R^{29}$ s may be the same or different, or

(iii)



wherein V, Q and R<sup>30</sup> are defined as the same as the above;

E represents hydrogen or -OR<sup>33</sup> wherein R<sup>33</sup> is defined as the same as the above;

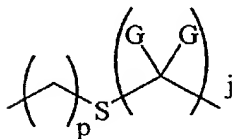
5 A is

(i)



wherein m represents an integer of 0 to 5, G represents hydrogen, fluorine, chlorine, bromine, iodine, trifluoromethyl, C<sub>1</sub>-C<sub>4</sub> linear alkyl or C<sub>3</sub>-C<sub>6</sub> branched alkyl, and all Gs may be the same or different,

10 (ii)



wherein j represents an integer of 1 to 4, p represents an integer of 0 or 1, G is defined as the same as the above, and all Gs may be the same or different,

(iii) -CH=CH-CH<sub>2</sub>-,

(iv) -CH<sub>2</sub>-CH=CH-,

15 (v) -CH<sub>2</sub>-O-CH<sub>2</sub>-,

(vi) -O-CH<sub>2</sub>-,

(vii) -C≡C-, or

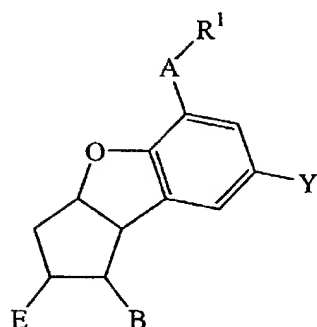
(viii) -C=C- (trans)]

3. The agent for modulating ~~modulating~~ growth or generation of hair according

20 to claim 2, wherein the said 5,6,7-trinor-4,8-inter-m-phenylene PGI<sub>2</sub> derivative is



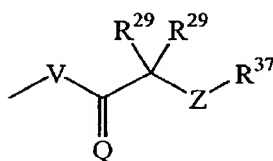
represented by the following Formula (I):



(I)

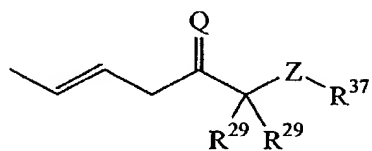
[wherein  $R^1$ , Y, E and A represent the following in the definition of claim 2, B is

(i)



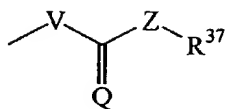
wherein V, Q,  $R^{29}$  and Z represent the following in the definition of claim 2, the two  $R^{29}$ s may be the same or different,  $R^{37}$  is  $C_3$ - $C_{12}$  cycloalkyl,  $C_4$ - $C_{13}$  cycloalkylalkyl,  $C_3$ - $C_{12}$  cycloalkyl substituted with 1 to 4  $R^{38}$ s (wherein  $R^{38}$  is hydrogen or  $C_1$ - $C_5$  alkyl),  $C_4$ - $C_{13}$  cycloalkylalkyl substituted with 1 to 3  $R^{38}$ s (wherein  $R^{38}$  is defined as the same as the above), phenyl, substituted phenyl (wherein the substituent is the same as the substituent defined for the substituted phenyl in claim 2),  $\alpha$ -naphthyl,  $\beta$ -naphthyl, 2-pyridyl, 3-pyridyl, 4-pyridyl,  $\alpha$ -furyl,  $\beta$ -furyl,  $\alpha$ -thienyl or  $\beta$ -thienyl,

(ii)



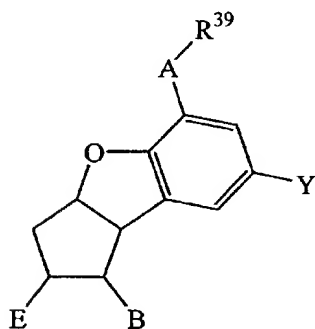
wherein Q,  $R^{29}$ , Z and  $R^{37}$  are defined as the same as the above, and the two  $R^{29}$ s may be the same or different, or

(iii)



wherein V, Q, Z and R<sup>37</sup> are defined as the same as the above].

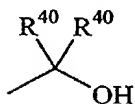
4. The agent for modulating growth or generation of hair according to claim 3, wherein the said 5,6,7-trinor-4,8-inter-m-phenylene PGI<sub>2</sub> derivative is represented by the following Formula (II):



(II)

[wherein R<sup>39</sup> is

(i)

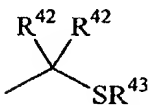


wherein R<sup>40</sup> is hydrogen, C<sub>1</sub>-C<sub>4</sub> linear alkyl or trifluoromethyl, the two R<sup>40</sup> may be the same or different,

(ii) -COOR<sup>41</sup>

wherein R<sup>41</sup> is hydrogen, a pharmacologically acceptable cation or C<sub>1</sub>-C<sub>12</sub> linear alkyl,

(iii)



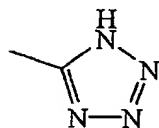
wherein R<sup>42</sup> is hydrogen, C<sub>1</sub>-C<sub>4</sub> linear alkyl or trifluoromethyl, the two R<sup>42</sup>s may be the same or different, R<sup>43</sup> is hydrogen, C<sub>1</sub>-C<sub>4</sub> linear alkyl, phenyl, or -C(=O)-R<sup>44</sup>

wherein  $R^{44}$  represents  $C_1$ - $C_4$  linear alkyl,

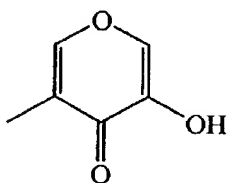
(iv)  $-\text{CH}_2\text{-}R^{45}$

wherein  $R^{45}$  is

(1)

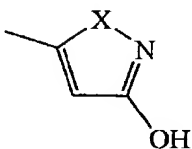


(2)



or

(3)

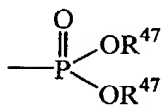


wherein X represents the following in the definition of claim 2,

(v)  $-\text{C}(\text{R}^{46})_3$

wherein  $R^{46}$  represents hydrogen, fluorine, cyano or  $C_1$ - $C_4$  alkyl, and all  $R^{46}$ s may be the same or different,

(vi)



wherein  $R^{47}$  represents hydrogen,  $C_1$ - $C_4$  alkyl, or a pharmacologically acceptable cation, and the two  $R^{47}$ s may be the same or different, or

(vii)  $-\text{N}(\text{R}^{48})_2$

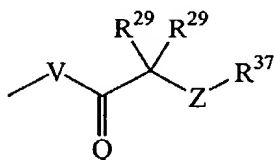
wherein  $R^{48}$  is hydrogen,  $-\text{C}(=\text{O})\text{-}R^{49}$  or  $-\text{SO}_2\text{-}R^{49}$  wherein  $R^{49}$  is  $C_1$ - $C_4$  linear alkyl or phenyl, and the two  $R^{48}$ s may be the same or different (when one of  $R^{48}$ s is  $-\text{SO}_2\text{-}$

$R^{49}$ , the other  $R^{48}$  is not  $-SO_2-R^{49}$ ),

Y is hydrogen, fluorine, chlorine or bromine,

B is

(i)



5 wherein V is

(1)  $-CH_2CH_2-$ ,

(2)  $-C \equiv C-$ ,

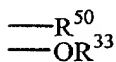
or

(3)  $-CH=CH-$ ,

10 Q is

(1)  $=O$ ,

(2)



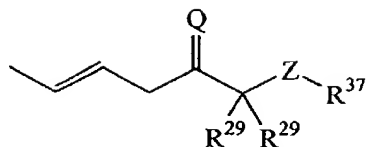
or

(3)



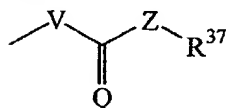
15 wherein  $R^{50}$  is hydrogen,  $C_1$ - $C_4$  linear alkyl,  $C_3$  or  $C_4$  branched alkyl, or trifluoromethyl,  $R^{33}$  represents the following in the definition of claim 2, the two  $R^{50}$ 's may be the same or different,  $R^{29}$  represents the following in the definition of claim 2, and the two  $R^{29}$ 's may be the same or different, Z represents the following in the definition of claim 2, and  $R^{37}$  represents the following in the definition of claim 3,

20 (ii)



wherein Q, R<sup>29</sup>, Z and R<sup>37</sup> are defined as the same as the above, and the two R<sup>29</sup>s may be the same or different, or

(iii)



wherein V, Q, Z and R<sup>37</sup> are defined as the same as the above,

5 E represents the following in the definition of claim 2,

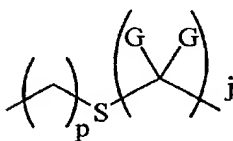
A is

(i)



wherein m represents an integer of 0 to 3, G is hydrogen, fluorine, chlorine, bromine, iodine, trifluoromethyl or C<sub>1</sub>-C<sub>4</sub> linear alkyl, and all Gs may be the same or different,

10 (ii)



wherein j represents an integer of 1 or 2, p represents the following in the definition of claim 2, G is defined as the same as the above, and all Gs may be the same or different,

(iii) -CH=CH-CH<sub>2</sub>-,

15 (iv) -CH<sub>2</sub>-CH=CH-,

(v) -CH<sub>2</sub>-O-CH<sub>2</sub>-,

(vi) -O-CH<sub>2</sub>-,

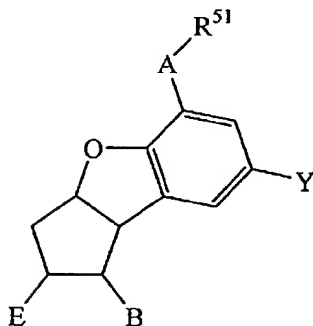
(vii) -C≡C-

or

(viii)  $-C=C-$  (trans)].

5. The agent for modulating growth or generation of hair according to claim 4, wherein the said 5,6,7-trinor-4,8-inter-m-phenylene PGI<sub>2</sub> derivative is represented by

5 the following Formula (III):



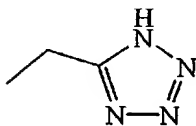
( III )

[wherein  $R^{51}$  is

(i)  $-COOR^{52}$

wherein  $R^{52}$  is hydrogen, a pharmacologically acceptable cation or methyl, or

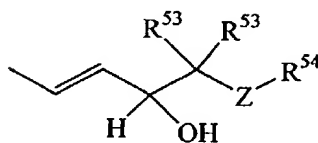
(ii)



10 wherein Y is hydrogen or fluorine,

B is

(i)

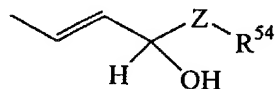


wherein  $R^{53}$  is hydrogen, fluorine or  $C_1$ - $C_4$  alkyl, the two  $R^{53}$ s may be the same or different, Z represents the following in the definition of claim 2,  $R^{54}$  is  $C_5$ - $C_7$

15 cycloalkyl, phenyl, or substituted phenyl (wherein the substituent is the same as the

substituent defined for the substituted phenyl in claim 2), or

(ii)



wherein Z and R<sup>54</sup> are defined as the same as the above,

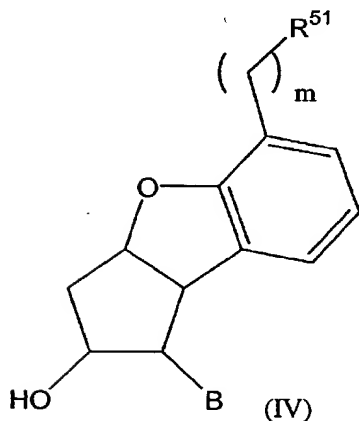
E is hydrogen or -OH,

5 A is



wherein m represents an integer of 0 to 2, G represents hydrogen or fluorine, and all Gs may be the same or different].

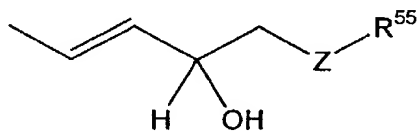
6. The agent for modulating growth or generation of hair according to claim 5,  
wherein the said 5,6,7-trinor-4,8-inter-m-phenylene PGI<sub>2</sub> derivative is represented by  
the following Formula (IV):



[wherein R<sup>51</sup> represents the following in the definition of claim 5,

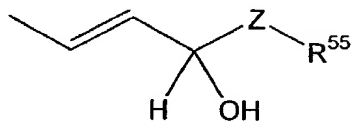
B is

(i)



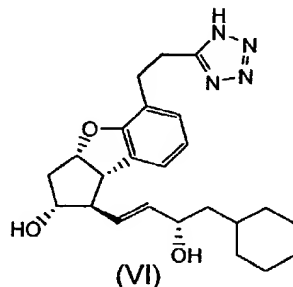
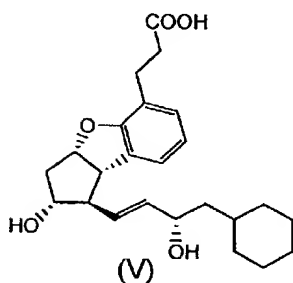
wherein Z represents the following in the definition of claim 2,  $R^{55}$  is  $C_5-C_7$  cycloalkyl or phenyl, or

(ii)



wherein Z and  $R^{55}$  are defined as the same as the above, m represents an integer of 0 to 2].

7. The agent for modulating growth or generation of hair according to claim 6, wherein the said 5,6,7-trinor-4,8-inter-m-phenylene  $PGI_2$  derivative is represented by the following Formula (V) or (VI).



8. The agent for modulating growth or generation of hair according to any one of claims 1 to 7, which is a promoting agent for growth or generation of hair.

9. Use of a prostaglandin EP4 receptor ligand for production of an agent for modulating growth or generation of hair.

10. The use according to claim 9, wherein the said prostaglandin EP4 receptor ligand is a 5,6,7-trinor-4,8-inter-m-phenylene  $PGI_2$  derivative of said Formula (I) (wherein the definitions of the substituents in Formula (I) are the same as the definitions of the respective substituents in Formula (I) in claim 2) or a pharmacologically acceptable salt thereof.

11. The use according to claim 10, wherein the said 5,6,7-trinor-4,8-inter-m-phenylene  $PGI_2$  derivative is represented by Formula (I) (wherein the definitions of



the substituents in Formula (I) are the same as the definitions of the respective substituents in Formula (I) in claim 3) or a pharmacologically acceptable salt thereof.

12. The use according to claim 11, wherein the said 5,6,7-trinor-4,8-inter-m-phenylene PGI<sub>2</sub> derivative is represented by Formula (II) (wherein the definitions of the substituents in Formula (II) are the same as the definitions of the respective substituents in Formula (II) in claim 4) or a pharmacologically acceptable salt thereof.

13. The use according to claim 12, wherein the said 5,6,7-trinor-4,8-inter-m-phenylene PGI<sub>2</sub> derivative is represented by Formula (III) (wherein the definitions of the substituents in Formula (III) are the same as the definitions of the respective substituents in Formula (III) in claim 5) or a pharmacologically acceptable salt thereof.

14. The use according to claim 13, wherein the said 5,6,7-trinor-4,8-inter-m-phenylene PGI<sub>2</sub> derivative is represented by Formula (IV) (wherein the definitions of the substituents in Formula (IV) are the same as the definitions of the respective substituents in Formula (IV) in claim 6) or a pharmacologically acceptable salt thereof.

15. The use according to claim 14, wherein the said 5,6,7-trinor-4,8-inter-m-phenylene PGI<sub>2</sub> derivative is represented by the said Formula (V) or (VI).

16. The use according to any one of claims 9 to 15, wherein the said agent for modulating growth or generation of hair is an agent for promoting growth or generation of hair.

17. A method for modulating growth or generation of hair comprising administering a prostaglandin EP4 receptor ligand in an amount effective for modulating growth or generation of hair to human or an animal.

18. The method according to claim 17, wherein the said prostaglandin EP4 receptor ligand is a 5,6,7-trinor-4,8-inter-m-phenylene PGI<sub>2</sub> derivative of the said Formula (I) (wherein the definitions of the substituents in Formula (I) are the same as

the definitions of the respective substituents in Formula (I) in claim 2) or a pharmacologically acceptable salt thereof.

19. The method according to claim 18, wherein the said 5,6,7-trinor-4,8-inter-m-phenylene PGI<sub>2</sub> derivative is represented by Formula (I) (wherein the definitions of the substituents in Formula (I) are the same as the definitions of the respective substituents in Formula (I) in claim 3) or a pharmacologically acceptable salt thereof.

20. The method according to claim 19, wherein the said 5,6,7-trinor-4,8-inter-m-phenylene PGI<sub>2</sub> derivative is represented by Formula (II) (wherein the definitions of the substituents in Formula (II) are the same as the definitions of the respective substituents in Formula (II) in claim 4) or a pharmacologically acceptable salt thereof.

21. The method according to claim 20, wherein the said 5,6,7-trinor-4,8-inter-m-phenylene PGI<sub>2</sub> derivative is represented by Formula (III) (wherein the definitions of the substituents in Formula (III) are the same as the definitions of the respective substituents in Formula (III) in claim 5) or a pharmacologically acceptable salt thereof.

22. The method according to claim 21, wherein the said 5,6,7-trinor-4,8-inter-m-phenylene PGI<sub>2</sub> derivative is represented by Formula (IV) (wherein the definitions of the substituents in Formula (IV) are the same as the definitions of the respective substituents in Formula (IV) in claim 6) or a pharmacologically acceptable salt thereof.

23. The method according to claim 22, wherein the said 5,6,7-trinor-4,8-inter-m-phenylene PGI<sub>2</sub> derivative is represented by the said Formula (V) or (VI).

24. The method according to any one of claims 17 to 23, wherein the said agent for modulating growth or generation of hair is an agent for promoting growth or generation of hair.